Message

From: MacNicholl, Peter@DTSC [Peter.MacNicholl@dtsc.ca.gov]

Sent: 11/12/2019 7:10:49 PM

To: Fennessy, Christopher [christopher.fennessy@Rocket.com]; MacDonald, Alex@Waterboards

[Alex.MacDonald@waterboards.ca.gov]; Keller, Lynn [Keller.Lynn@epa.gov]; Lae, Tom/SAC [Tom.Lae@jacobs.com];

ROJAS-MICKELSON, DAEWON [rojas-mickelson.daewon@epa.gov]

CC: Bush, Dan (Dan.Bush@arcadis.com) [Dan.Bush@arcadis.com]; Rob Wilhelm (RWilhelm@Hargis.com)

[RWilhelm@Hargis.com]

Subject: Re: Area 40 Over-Excavation Decisions

Hi Chris,

As discussed in the field visit, DTSC has no objections to this approach and supports field implementation. Thank you.

-Pete

From: Fennessy, Christopher <christopher.fennessy@Rocket.com>

Sent: Friday, November 8, 2019 3:54 PM

To: MacDonald, Alex@Waterboards <Alex.MacDonald@waterboards.ca.gov>; Keller, Lynn (Keller.Lynn@epa.gov) <Keller.Lynn@epa.gov>; Lae, Tom/SAC (Tom.Lae@jacobs.com) <Tom.Lae@jacobs.com>; MacNicholl, Peter@DTSC <Peter.MacNicholl@dtsc.ca.gov>; rojas-mickelson.daewon@epa.gov <rojas-mickelson.daewon@epa.gov> Cc: Bush, Dan (Dan.Bush@arcadis.com) <Dan.Bush@arcadis.com>; Rob Wilhelm (RWilhelm@Hargis.com)

<RWilhelm@Hargis.com>

Subject: Area 40 Over-Excavation Decisions

Hi Everyone – As stated in my weekly update earlier this week, the total amount of soil removed from the originally proposed excavation was 37,858 tons. That means we have about 3,800 tons (10%) of material for over-excavation. We have already over-excavated the areas shown on the map I sent on Monday. These already over-excavated areas totaled 2,236 tons, leaving approximately 1,550 tons remaining to be over-excavated. This equates to between 65-70 trucks hauling an average of 23 tons each. We have received all initial laboratory data except for remedial area 38B-S-RA1 (note, we are also awaiting sidewall data for areas already over-excavated). Based upon the laboratory data we have received, none of the soil contains perchlorate at concentrations above the human health screening level of 55mg/Kg and none of the locations contain dioxins above 6.8ng/Kg; however, the following locations exceed the perchlorate screening levels for either the 2' (3.3mg/Kg), 6' (6.1mg/Kg) or 12' (11mg/Kg):

F-38B-S-RA2-4 – 2 foot floor sample contained 8.1mg/Kg perchlorate

W-38B-S-RA4-2 - 6 foot wall sample contained 18mg/Kg perchlorate F-38B-S-RA4-5 - 6 foot floor sample contained 17mg/Kg perchlorate F-38B-S-RA4-9 - 6 foot floor sample contained 6.5mg/Kg perchlorate

W-39B-S-RA2-4 - 2 foot wall sample contained 4.2mg/Kg perchlorate W-39B-S-RA2-8 - 6 foot wall sample contained 9.7mg/Kg perchlorate W-39B-S-RA2-10 - 6 foot wall sample contained 46mg/Kg perchlorate W-39B-S-RA2-11 - 6 foot wall sample contained 16mg/Kg perchlorate W-39B-S-RA2-13 - 6 foot wall sample contained 12mg/Kg perchlorate

F-39B-S-RA3-1-10 foot floor sample contained 16mg/Kg perchlorate W-39B-S-RA3-2-2 foot wall sample contained 28mg/Kg perchlorate

W-39B-S-RA4-2 – 6 foot wall sample contained 27mg/Kg perchlorate

W-40B-S-RA1-3 - 6 foot wall sample contained 9.8mg/Kg perchlorate W-40B-S-RA1-4 - 2 foot wall sample contained 4.6mg/Kg perchlorate

Based upon the data above, AR suggests over-excavating at the following locations (shown highlighted on attached) until we reach the 3,800 ton limit:

- W-39B-S-RA2-10 should be over-excavated laterally another 5 feet and down to 6 feet bgs.
- W-39B-S-RA4-2 should be over-excavated laterally 5 feet and down to 6 feet bgs.
- W-39B-S-RA3-2 should be over-excavated laterally 5 feet and down to 2 feet bgs.

Let me know if you agree or if you would like to propose an alternate approach. Since 39B-S-RA2, 39B-S-RA4, and 40B-S-RA1 do not require additional excavation deeper than 6 feet, we will continue backfilling these excavations up to 6 feet. We would like to make a final decision on over-excavation areas by the end of the day Tuesday.

Let me know if you would like to have a call on Tuesday. Thanks, Chris

Christopher M. Fennessy, P.E. Aerojet Rocketdyne, Inc.

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